



APR 16 2012

Gerardo C. Rios, Chief  
Permits Office  
Air Division  
U.S. EPA - Region IX  
75 Hawthorne St  
San Francisco, CA 94105

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**  
**District Facility # N-2253**  
**Project # N-1120248**

Dear Mr. Rios:

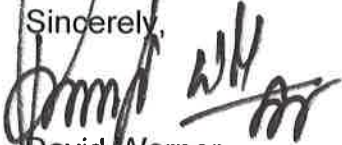
Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Ball Metal Food Container Corporation, located at 300 Greger Street, Oakdale, CA 95361, which has been issued a Title V permit. Ball Metal Food Container Corporation is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project is to permit an existing 240 bhp emergency standby internal combustion engine powering a firewater pump.

Enclosed is the engineering evaluation of this application and proposed Authority to Construct # N-2253-23-0 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Jagmeet Kahlon, Permit Services

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-8400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585

**San Joaquin Valley Air Pollution Control District  
Authority to Construct  
Application Review**

Facility Name:	Ball Metal Food Container Corporation	Date:	April 4, 2012
Mailing Address:	300 Greger Street Oakdale, CA 95361	Engineer:	Jagmeet Kahlon
		Lead Engineer:	Nick Peirce
Contact Person:	Matt Harris		
Telephone:	(303) 460-5445		
Fax:	(303) 265-9138		
Application #(s):	N-2253-23-0		
Project #:	N-1120248		
Deemed Complete:	March 7, 2012		

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**I. PROPOSAL**

Ball Metal Food Container Corporation is requesting a permit for an existing 240 bhp diesel-fueled emergency standby internal combustion engine powering a firewater pump.

This facility is a Major Source for VOC emissions and currently possesses a Title V permit. The proposed project is a Minor Modification to the Title V permit. The applicant has requested to issue the ATC with a Certificate of Conformity (COC), which is EPA's 45-day review of the project prior to the issuance of the final ATC.

**II. APPLICABLE RULES**

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)  
Rule 2520 Federally Mandated Operating Permit (06/21/99)  
Rule 4001 New Source Performance Standards (04/14/99)  
Rule 4101 Visible Emissions (2/17/05)  
Rule 4102 Nuisance (12/17/92)  
Rule 4201 Particulate Matter Concentration (12/17/92)  
Rule 4701 Internal Combustion Engines – Phase 1 (8/21/03)  
Rule 4702 Internal Combustion Engines (8/18/11)  
Rule 4801 Sulfur Compounds (12/17/92)  
California Health & Safety Code 41700 (Public Nuisance)  
California Health & Safety Code 42301.6 (School Notice)  
Title 17 CCR Section 93115: Airborne Toxic Control Measure (ATCM) for  
Stationary Compression-Ignition (CI) Engines

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA) California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. PROJECT LOCATION

The proposed engine is located at 300 Greger Street, Oakdale, California. The District has verified that the engine is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, the public notice under the California Health and Safety Code 42301.6 is not required for this project.

### IV. PROCESS DESCRIPTION

The proposed engine powers a fire pump assembly. Other than emergency operation, the engine may be operated up to 100 hours per calendar year for maintenance and testing purposes.

### V. EQUIPMENT LISTING

240 BHP CUMMINS MODEL 6CTA8.3-F1 DIESEL-FUELED EMERGENCY  
STANDBY INTERNAL COMBUSTION ENGINE POWERING A FIREWATER PUMP

### VI. EMISSION CONTROL TECHNOLOGY EVALUATION

The engine is equipped with:

- ☒ Turbocharger
- ☒ Very Low (0.0015%) sulfur diesel

The emission control devices/technologies and their effect on diesel engine emissions detailed below are from *Non-catalytic NO<sub>x</sub> Control of Stationary Diesel Engines*, by Don Koeberlein, CARB.

The turbocharger reduces the NO<sub>x</sub> emission rate from the engine by approximately 10% by increasing the efficiency and promoting more complete burning of the fuel.

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO<sub>x</sub> emissions by over 99% from standard diesel fuel.

### VII. GENERAL CALCULATIONS

#### A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	100 hours/year
Density of diesel fuel:	7.1 lb/gal

EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly $\approx$ 35%
PM <sub>10</sub> fraction of diesel exhaust:	0.96 (CARB, 1988)

## B. Emission Factors

### 1. Pre-Project Emission Factors (EF1)

This is a new emissions unit; therefore, EF1 does not exist at this point.

### 2. Post-Project Emission Factors (EF2)

Pollutant	EF2 (g/bhp-hr)	Source
NO <sub>x</sub>	5.03	Manufacturer Datasheet
SO <sub>x</sub>	0.0051	Mass Balance Equation Below
PM <sub>10</sub>	0.25	Manufacturer Datasheet
CO	2.78	Manufacturer Datasheet
VOC	0.93	Manufacturer Datasheet

$$\frac{0.000015 \text{ lb-S}}{\text{lb-fuel}} \times \frac{7.1 \text{ lb-fuel}}{\text{gallon}} \times \frac{2 \text{ lb-SO}_2}{1 \text{ lb-S}} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp-hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g-SO}_x}{\text{bhp-hr}}$$

## C. Calculations

### 1. Pre-Project Potential to Emit (PE1)

This is a new emissions unit. Therefore, PE1 is equal to zero.

### 2. Post-Project Potential to Emit (PE2)

$$\begin{aligned} \text{PE2 (lb/day)} &= (\text{EF2 g/bhp-hr})(240 \text{ bhp})(24 \text{ hr/day})(\text{lb}/453.6 \text{ g}) \\ \text{PE2 (lb/yr)} &= (\text{EF2 g/bhp-hr})(240 \text{ bhp})(100 \text{ hr/yr})(\text{lb}/453.6 \text{ g}) \end{aligned}$$

Pollutant	EF2 (g/bhp-hr)	PE2 (lb/day)	PE2 (lb/yr)
NO <sub>x</sub>	5.03	63.9	266
SO <sub>x</sub>	0.0051	0.1	0
PM <sub>10</sub>	0.25	3.2	13
CO	2.78	35.3	147
VOC	0.93	11.8	49

### 3. Quarterly Net Emissions Change

This calculation is required for application's emission profile, which is used for the District's internal tracking purposes. QEC for the new emission unit is determined as follows:  $QEC = (PE2-PE1)/4$

Pollutant	Q1 (lb)	Q2 (lb)	Q3 (lb)	Q4 (lb)
NO <sub>x</sub>	66	66	67	67
SO <sub>x</sub>	0	0	0	0
PM <sub>10</sub>	3	3	3	4
CO	36	37	37	37
VOC	12	12	12	13

### 4. Adjusted increase in Permitted Emissions (AIPE)

AIPE is used to determine if BACT is required for emission units that are being modified. The proposed emissions unit is considered a new emissions unit to the facility. Therefore, AIPE calculations are not required.

## D. Facility Emissions

### 1. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, § 4.9, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Potential to emit for each permit unit is taken from the application review under project N1110746.

Permit Number	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-2253-1-7	0	0	97	0	58,579
N-2253-2-7	0	0		0	
N-2253-3-7	0	0		0	
N-2253-4-7	0	0		0	
N-2253-6-7	0	0		0	
N-2253-7-7	0	0		0	
N-2253-8-7	0	0		0	
N-2253-9-7	0	0		0	
N-2253-21-3	0	0		0	
N-2253-22-1	0	0		0	

Continue...

Permit Number	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-2253-15-10	1,606	183	511	10,111	40,521
N-2253-16-10	2,008	219	621	12,337	
N-2253-17-10	1,533	183	475	9,563	
N-2253-18-7	0	0	0	0	
Shared Thermal Oxidizer	6,862	183	548	6,023	
N-2253-19-4	0	0	0	0	27
N-2253-20-4	0	0	0	0	30
ERCs	0	0	0	0	0
SSPE1	12,009	768	2,252	38,034	99,157
Major Source Threshold Level	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

2. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, § 4.10, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Permit Number	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-2253-1-7	0	0	97	0	58,579
N-2253-2-7	0	0		0	
N-2253-3-7	0	0		0	
N-2253-4-7	0	0		0	
N-2253-6-7	0	0		0	
N-2253-7-7	0	0		0	
N-2253-8-7	0	0		0	
N-2253-9-7	0	0		0	
N-2253-21-3	0	0		0	
N-2253-22-1	0	0		0	

Continue...

Permit Number	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-2253-15-10	1,606	183	511	10,111	40,521
N-2253-16-10	2,008	219	621	12,337	
N-2253-17-10	1,533	183	475	9,563	
N-2253-18-7	0	0	0	0	
Shared Thermal Oxidizer	6,862	183	548	6,023	
N-2253-19-4	0	0	0	0	27
N-2253-20-4	0	0	0	0	30
<b>N-2253-23-0</b>	<b>266</b>	<b>0</b>	<b>13</b>	<b>147</b>	<b>49</b>
ERCs	0	0	0	0	0
SSPE2	12,275	768	2,265	38,181	99,206
Major Source Threshold Level	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

### 3. Stationary Source Increase in Permitted Emissions (SSIPE)

It is District Practice to define the SSIPE as the difference of SSPE2 and SSPE1.

Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NO <sub>x</sub>	12,275	12,009	266
SO <sub>x</sub>	768	768	0
PM <sub>10</sub>	2,265	2,252	13
CO	38,181	38,034	147
VOC	99,206	99,157	49

### 4. SB-288 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and
- B. If a public notification is triggered (District Rule 2201, §5.4.1).

Per section VII.D.2 of this document, this facility is a Major Source for VOC. Thus, analysis is required to determine if this project triggers an SB-288 Major Modification.

Per the District's draft policy titled "Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 and Federal Major

Modifications”, a permitting action is an SB-288 Major Modification if it will result in an increase in emission in excess of the thresholds specified in section 3.36 of Rule 2201. The draft policy further states that if the increase in permitted emissions (IPE) are less than to or equal to 0.5 lb/day then they are to be rounded to zero (consistent with District Policy APR-1130).

The average daily VOC emissions from the engine would be 0.1 lb/day (49 lb-VOC/yr ÷ 365 days/yr), less than the 0.5 lb/day threshold, and therefore, are rounded to zero. Therefore, this project is not an SB-288 Major Modification.

5. Federal Major Modification

The purpose of Federal Major Modification calculations is to determine the following:

- A. If a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions (District Rule 2201, §4.2.3.5); and
- B. If an Alternate Siting analysis must be performed (District Rule 2201, §4.15.1);
- C. If the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- D. If a public notification is triggered. (District Rule 2201, §5.4.1).

Per section VII.D.2 of this document, this facility is a Major Source for VOC. Thus, analysis is required to determine if this project triggers a Federal Major Modification.

Per the District's draft policy titled “Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 and Federal Major Modifications”, a permitting action is an SB-288 Major Modification if it will result in an increase in emission in excess of the thresholds specified in section 3.36 of Rule 2201. The draft policy further states that if the increase in permitted emissions (IPE) are less than to or equal to 0.5 lb/day then they are to be rounded to zero (consistent with District Policy APR-1130).

The average daily VOC emissions from the engine would be 0.1 lb/day (49 lb-VOC/yr ÷ 365 days/yr), less than the 0.5 lb/day threshold, and therefore, are rounded to zero. Therefore, this project is not a Federal Major Modification.

## VIII. COMPLIANCE

### Rule 2201 New and Modified Stationary Source Review Rule

#### 1. Best Available Control Technology (BACT)

BACT requirements shall be triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions:

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;
- Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined in this rule.

Per section VII.C.2 of this document, PE2 is greater than 2.0 pounds per day for NO<sub>x</sub>, PM<sub>10</sub>, CO and VOC emissions. However, facility's total CO emissions are less than 200,000 pounds per year. Thus, BACT is triggered for NO<sub>x</sub>, PM<sub>10</sub>, and VOC emissions.

The proposed engine was installed in 2000. BACT at the time of installation would have required them to comply with the following per District BACT Guideline 3.1.4 (3/30/2000):

NO<sub>x</sub>: 7.2 g/bhp-hr or less  
PM<sub>10</sub>: Low-sulfur diesel fuel (0.05% by wt. sulfur or less)  
VOC: Positive crankcase ventilation (unless it voids the Underwriters Laboratories (UL) certification]; Oxidation catalyst (technologically feasible)

The BACT was satisfied by providing the following:

NO<sub>x</sub>: 5.03 g/bhp  
PM<sub>10</sub>: Ultra-low sulfur diesel fuel (15 ppmw sulfur or less)  
VOC: The proposed engine cannot be equipped with a positive crankcase ventilation system or oxidation catalyst as this may void its UL certification.

The proposed engine complied with the BACT standards at the time of installation in year 2000.

The engine was installed without notifying the District; under such circumstances, the District policy is to limit the BACT analysis to the types of controls that can be applied to the equipment<sup>1</sup>. This engine is UL Certified, and the UL certification did not include any control equipment for NO<sub>x</sub> (e.g., non-selective catalytic reduction system (NSCR) or selective catalytic reduction system (SCR)), PM<sub>10</sub> (e.g., diesel particulate filters) or VOC (e.g., catalytic oxidation system or a positive crankcase ventilation system). Addition of any such system would void the UL certification, which is required for a firewater pump engine. Therefore, further evaluation of these controls is not required, and the BACT requirements are met.

## 2. Offsets

Pursuant to Rule 2201, Section 4.6.2, Offsets are not required for emergency equipment as long as it does not operate more than 200 hours per year for non-emergency purposes.

The operation of this engine will be limited to 100 hours per year for non-emergency purposes. Therefore, no offsets are required.

## 3. Public Notification

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications (SB-288 or Federal)
- New emission units with a PE>100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSPE exceeding 20,000 lb/yr for any one pollutant

Per calculations section VII of this document, this project does not exceed any thresholds mentioned in the above items. Thus, public notice is not required for this project.

## 4. Daily Emission Limits (DELs)

The daily emissions limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions. The following DELs will be established.

- Emissions from this IC engine shall not exceed any of the following limits: 5.03 g-NO<sub>x</sub>/bhp-hr, 2.78 g-CO/bhp-hr, or 0.93 g-VOC/bhp-hr. [District Rule 2201]

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<sup>1</sup> Referenced from FYI-98 (11/15/2004)

- PM<sub>10</sub> emissions rate shall not exceed 0.25 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102]
- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

## 5. Compliance Assurance

### Source Testing

Pursuant to District Policy APR-1705, source testing is not required for emergency standby IC engines to demonstrate compliance with Rule 2201.

### Monitoring

Monitoring is not required.

### Recordkeeping

The permittee will be required to keep records of emergency and non-emergency hours of operation of this engine.

### Reporting

Reporting is not required.

Compliance is expected with this Rule.

## **Rule 2520 Federally Mandated Operating Permits**

Ball Metal Container Corporation possesses a Title V permit. The proposed project is a minor modification to the Title V permit since the applicant is not proposing to relax any monitoring, recordkeeping, and reporting requirements as part of this project. The applicant has requested to issue the ATC with COC. Therefore, the following conditions will be included in the permit:

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and

- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix IV of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. The facility is expected to notify the District by filing TV Form-008 upon implementing the ATC. The District Compliance Division is expected to submit a change order to implement ATC into Permit to Operate (PTO).

Compliance is expected with this Rule.

#### **Rule 4001 New Source Performance Standards (NSPS)**

40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

##### §60.4200 - Applicability

This subpart is applicable to owners and operators of stationary compression ignited internal combustion engines that commence construction after July 11, 2005, where the engines are:

- 1) Manufactured after April 1, 2006, if not a fire pump engine.
- 2) Manufactured as a National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

Since the proposed fire pump engine was manufactured on January 6, 2000, this subpart does not apply.

#### **Rule 4101 Visible Emissions**

Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringelmann 1 or equivalent to 20% opacity. The following condition will be placed on each permit:

- No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Compliance is expected with this Rule.

## Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The following condition will be placed on each permit:

- No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

## California Health & Safety Code 41700 - Health Risk Assessment

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite. The Risk Management Review summary is as follows:

Risk Management Review Summary			
Categories	N-2253-23-0	Project Totals	Facility Totals
Prioritization Score	NA <sup>1</sup>	NA <sup>1</sup>	>1
Acute Hazard Index	NA <sup>2</sup>	NA <sup>2</sup>	0.49
Chronic Hazard Index	NA <sup>2</sup>	NA <sup>2</sup>	0.88
Maximum Individual Cancer Risk	2.60E-06	2.60E-06	3.39E-06
T-BACT Required?	Yes - PM <sub>10</sub>		
Special Permit Conditions?	Yes		

### 1. T-BACT Guidance

Per District Policy APR 1905 (3/2/2001), in order to control emissions of hazardous air pollutants to the maximum level achievable, applicants must apply Toxic Best Available Control Technology (T-BACT) to each new and modified emissions units with a greater than de minimus increase in cancer risk<sup>2</sup> or a greater than de minimus increase in non-cancer risk<sup>3</sup>. T-BACT is the most stringent limitation or control technique for hazardous air pollutants of the following:

1. Has been achieved in practice for such emissions unit and class of source; or
2. Is contained in any State Implementation Plan approved by the Environmental Protection Agency for such emissions unit category and class of source. A specific limitation or control technique shall not apply if the owner or operator of

<sup>2</sup> A de minimus increase in cancer risk is an increase in risk of one per million, as determined in section VIII of District Policy 1905.

<sup>3</sup> A de minimus increase in non-cancer risk is an increase in the hazard index of one, as determined in Section VII of District Policy 1905.

the proposed emissions unit demonstrates to the satisfaction of the APCO that such limitation or control technique is not presently achievable; or

3. Is contained in any Federal Standard promulgated pursuant to FCAA Section 111 (NSPS) or Section 112 (MACT) for such emissions unit category and class of source; or
4. Is any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be technologically feasible for such class or category of sources or for a specific source, and cost effective as determined by the District.

The District considers T-BACT for PM<sub>10</sub> to be equivalent to BACT for PM<sub>10</sub>. BACT Guideline 3.1.4 requires the use of low sulfur diesel fuel to reduce PM<sub>10</sub> emissions (see Appendix II).

## 2. Top-Down BACT Analysis

The applicant has proposed to use ultra-low sulfur diesel fuel containing 15 ppmw (or less) sulfur content. Therefore, this proposal satisfies the T-BACT requirements.

To ensure that the human health risks will not exceed District allowable levels; the following conditions will be included in the permit:

- PM<sub>10</sub> emissions rate shall not exceed 0.25 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102]
- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 4102, 4702 and 17 CCR 93115]

Compliance is expected with this Rule.

## Rule 4201 Particulate Matter Concentration

Section 3.0 of this Rule states: A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

The particulate matter concentration in the engine's exhaust stream can be estimated as follows:

$$PM \left( \frac{\text{gr}}{\text{dscf}} \right) = \frac{\text{Emissions} \left( \frac{\text{gr} - \text{PM}}{\text{min}} \right)}{\text{Exhaust Flow (scfm)} \times \text{Moisture Correction}}$$

Per manufacturer's datasheet, the exhaust flow rate at 240 bhp will be 820 acfm @ 826°F. As a conservative estimate, it is assumed the engine exhaust's moisture content is 10%. Therefore, the exhaust particulate matter emission concentration at 60°F would be:

$$PM \left( \frac{\text{gr}}{\text{dscf}} \right) = \frac{\left( 0.132 \frac{\text{lb} - \text{PM}}{\text{hr}} \right) \left( 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}} \right) \left( \frac{\text{hr}}{60 \text{ min}} \right)}{\left( 820 \frac{\text{ft}^3}{\text{min}} \right) \left( \frac{460 + 60}{460 + 826} \right) (1 - 0.1)} = 0.05 \frac{\text{gr} - \text{PM}}{\text{dscf}}$$

Compliance is expected with this Rule.

## Rule 4701 Internal Combustion Engines – Phase 1

Since the applicable administrative requirements in Rule 4702 are equivalent or more stringent than that of the Rule 4701, compliance with Rule 4702 requirements will satisfy requirements of Rule 4701.

## Rule 4702 Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxides (SOx) from internal combustion engines.

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater. The proposed engine is rated at 240 bhp; thus, the rule applies to this engine.

Pursuant to Section 4.3, except for the requirements of Section 6.2.3, the requirements of this rule shall not apply to an internal combustion engine that meets the following conditions:

- The engine is operated exclusively to preserve or protect property, human life, or public health during a disaster or state of emergency, such as a fire or flood; and
- Except for operations (stated above), the engine is limited to operate no more than 100 hours per calendar year as determined by an operational non-resettable elapsed time meter, for periodic maintenance, periodic readiness testing, and readiness testing during and after repair work of the engine; and
- The engine is operated with an operational non-resettable elapsed time meter. In lieu of installing a non-resettable elapsed time meter, the operator of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and EPA. The operator of the engine shall properly maintain and operate the non-resettable elapsed time meter or alternative device in accordance with the manufacturer's instructions.

The proposed engine is used to power a direct-drive firewater pump assembly. Further, this engine will be limited to operate for 100 hours per calendar year for non-emergency purpose. The engine operation will be recorded using a non-resettable elapsed time meter. Thus, the requirements in this rule (with an exception of requirements in 6.2.3) do not apply to the proposed engine.

Section 6.2.3 requires that an owner claiming an exemption under Section 4.2 or Section 4.3 shall maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and submitted to the APCO upon request and at the end of each calendar year in a manner and form approved by the APCO. Therefore, the following conditions will be listed on the ATC to ensure compliance:

- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 4102, 4701, 4702 and 17 CCR 93115]
- The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4701, 4702 and 17 CCR 93115]

- All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 4701, 4702 and 17 CCR 93115]
- This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
- An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]

Compliance is expected with this rule.

### Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO<sub>2</sub>) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO<sub>2</sub>

T (standard temperature) = 60 °F or 520 °R

$$R (\text{universal gas constant}) = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$$

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - \text{S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} - \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times 1,000,000 = 1.0 \text{ ppmv}$$

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

### Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

#### §93115.5 - Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater than 50 (>50 bhp)

This regulation also stipulates that as of January 1, 2006 an owner or operator of a new or in-use stationary diesel-fueled CI emergency standby engine shall fuel the engine with CARB Diesel Fuel.

The proposed fire-pump engine was installed in 2000. Therefore, it is an "in-use" engine, per the ATCM, and is required to use CARB diesel fuel. The following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115]

#### §93115.3 Exemptions

Item (n) of this section states the requirements of section 93115.6(b)(3) do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated number of hours necessary to comply with the testing requirements of NFPA 25 "Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition.

The proposed in-use emergency fire pump assembly is directly driven by a stationary diesel fueled CI engine. Therefore, it is not subject to requirements in section 93115.6(b)(3).

- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 4102 and 4702 and 17 CCR 93115]

#### §93115.10 – Recordkeeping, Reporting, and Monitoring Requirements

This regulation stipulates that as of January 1, 2005, each owner or operator of an emergency standby diesel-fueled CI engine shall keep records and prepare a monthly summary that shall list and document the nature of use for each of the following:

- a. Emergency use hours of operation;
- b. Maintenance and testing hours of operation;
- c. Hours of operation for emission testing;
- d. Initial start-up hours; and
- e. If applicable, hours of operation to comply with the testing requirements of NFPA 25
- f. Hours of operation for all uses other than those specified in sections 'a' through 'd' above; and

- g. If applicable, DRP (Demand Response Program) engine hours of operation, and
- h. The fuel used.

The proposed emergency diesel IC engine powering a fire pump is exempt from the operation hours limitation provide the engine is only operated the amount of hours necessary to satisfy NFPA 25. Therefore, the following conditions (previously proposed in this engineering evaluation) will be listed on the ATCs to ensure compliance:

- The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, emergency usage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
- All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

Compliance is expected with this regulation.

### **California Environmental Quality Act (CEQA)**

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

## Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus, the District is the Lead Agency for this project.

This project results in 12.2 metric tons of CO<sub>2e</sub> per year<sup>4</sup> from the non-emergency use of the firewater pump engine. These emissions are equated to zero per District Policy APR-2015 (Zero Equivalency Policy for Greenhouse Gases, 230 metric tons of CO<sub>2e</sub> per year threshold). Therefore, the proposed project is assumed to have no significant impact on the global climate change.

## District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

## IX. RECOMMENDATION

Compliance with all applicable regulations is expected. Therefore, issuance of ATC N-2253-23-0 is recommended upon addressing comments from the public, EPA, ARB and the applicant.

## X. BILLING INFORMATION

Permit #	Fee Schedule	Fee Description	Previous Fee Schedule
N-2253-23-0	3020-10 C	240 bhp	None

## APPENDICES

- Appendix I: Draft Authority to Construct
- Appendix II: BACT Guideline 3.1.4 and Top-Down BACT Analysis
- Appendix III: Risk Management Review Summary
- Appendix IV: TV Form - 009

<sup>4</sup> Per CARB (March, 2010) GHG emission factor for CA low sulfur diesel is 73.349 kg/MMBtu; The maximum fuel rate in the engine would be 11.9 gal/hr and the engine will permitted to operate up to 100 hr/year for non-emergency purposes. Higher heating value of the diesel is assumed to be 0.137 MMBtu per gallon. Thus,

$$\begin{aligned}\text{CO}_{2e} &= (11.9 \text{ gal/hr})(100 \text{ hr/yr})(73.349 \text{ kg CO}_{2e}\text{/MMBtu})(1 \text{ metric ton}/1000 \text{ kg})(0.137 \text{ MMBtu/gal}) \\ &= 12 \text{ metric-tons/yr}\end{aligned}$$

Appendix I  
Draft Authority to Construct

San Joaquin Valley  
Air Pollution Control District

## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-2253-23-0

**ISSUANCE DATE:** DRAFT

**LEGAL OWNER OR OPERATOR:** BALL METAL FOOD CONTAINER CORP.  
**MAILING ADDRESS:** P O BOX 589  
BROOMFIELD, CO 80038-0589

**LOCATION:** 300 W GREGER ST  
OAKDALE, CA 95361-8613

**EQUIPMENT DESCRIPTION:**  
240 BHP CUMMINS MODEL 6CTA8.3-F1 DIESEL-FUELED EMERGENCY STANDBY INTERNAL COMBUSTION  
ENGINE POWERING A FIREWATER PUMP

## CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
7. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services  
N-2253-23-0 : Apr 2 2012 8:51AM - KAHLONU : Joint Inspection NOT Required

8. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
9. Emissions from this IC engine shall not exceed any of the following limits: 5.03 g-NOx/bhp-hr, 2.78 g-CO/bhp-hr, or 0.93 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. PM10 emissions rate shall not exceed 0.25 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2002 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 4102, 4701, 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
12. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4701, 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
14. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 4701, 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

DRAFT

**Appendix II**  
**BACT Guideline 3.1.4 and Top-Down BACT Analysis**

**San Joaquin Valley  
Unified Air Pollution Control District**

**Best Available Control Technology (BACT) Guideline 3.1.4\***

Last Update: March 30, 2000

**Emission Unit: Emergency Diesel I.C. Engine Driving a Fire Pump**

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Positive crankcase ventilation [unless it voids the Underwriters Laboratories (UL) certification]	Catalytic Oxidation	
SO <sub>x</sub>	Low-sulfur diesel fuel (0.05% by weight sulfur or less)		
NO <sub>x</sub>	Certified NO <sub>x</sub> emissions of 7.2 g/bhp-hr or less  <b>OR</b> Turbocharger with intercooler or aftercooler and timing retarded 4° relative to standard timing (unless voids UL certification)  <b>OR</b> Turbocharger with intercooler or aftercooler and injection timing not to be greater than 16° BTDC (this option may be used if it is consistent with District policy SSPE 16-1, "Determination of Injection Timing Retard for Diesel IC Engines", dated 08/14/96)		
CO		Oxidation Catalyst	
PM <sub>10</sub>	Low-sulfur diesel fuel (0.05% by weight sulfur or less)		

**\*This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

## **Top-Down BACT Analysis for NO<sub>x</sub>**

### **Step 1: Identify All Possible Control Technologies**

BACT Guideline 3.1.4 lists the following control technologies to reduce NO<sub>x</sub> emissions:

Achieved-in-Practice:

7.2 g/bhp-hr or less

Technologically Feasible:

None

Alternate Basic Equipment:

None

### **Step 2: Eliminate Technologically Infeasible Options**

All control options listed in step 1 are technologically feasible.

### **Step 3: Rank Remaining Control Technologies by Control Effectiveness**

1. 7.2 g/bhp-hr or less (achieved-in-practice)

### **Step 4: Cost Effectiveness Analysis**

There is no technologically feasible or alternative basic equipment listed in the guideline for which a cost-effectiveness analysis is required.

### **Step 5: Select BACT**

BACT for this engine would be 7.2 g-NO<sub>x</sub>/bhp-hr or less. NO<sub>x</sub> emissions from the proposed engine are 5.03 g/bhp-hr. Thus, BACT requirements are satisfied.

## **Top-Down BACT Analysis for PM<sub>10</sub>**

### **Step 1: Identify All Possible Control Technologies**

BACT Guideline 3.1.4 lists the following control technologies to reduce PM<sub>10</sub> emissions:

Achieved-in-Practice:

Use of low sulfur fuel (0.05% by wt. sulfur)

Technologically Feasible:

None

Alternate Basic Equipment:

None

### **Step 2: Eliminate Technologically Infeasible Options**

All control options listed in step 1 are technologically feasible.

### **Step 3: Rank Remaining Control Technologies by Control Effectiveness**

1. Use of low sulfur fuel (achieved-in-practice)

### **Step 4: Cost Effectiveness Analysis**

There is no technologically feasible or alternative basic equipment listed in the guideline for which a cost-effectiveness analysis is required.

### **Step 5: Select BACT**

BACT for this engine would be to use low sulfur fuel. The applicant has proposed use ultra-low sulfur (15 ppmw sulfur). Thus, BACT requirements are satisfied.

## **Top-Down BACT Analysis for VOC**

### **Step 1: Identify All Possible Control Technologies**

BACT Guideline 3.1.4 lists the following control technologies to reduce VOC emissions:

Achieved-in-Practice:

Positive crankcase ventilation system (unless it voids UL certification)

Technologically Feasible:

Oxidation catalyst

Alternate Basic Equipment:

None

### **Step 2: Eliminate Technologically Infeasible Options**

All control options listed in step 1 are technologically feasible.

### **Step 3: Rank Remaining Control Technologies by Control Effectiveness**

1. Catalytic Oxidation (Technologically Feasible)
2. PCV (unless it voids UL certification)

### **Step 4: Cost Effectiveness Analysis**

This engine is UL Certified, and the UL certification does not include a catalytic oxidation system or a positive crankcase ventilation system, and the addition of a catalytic oxidation system or a positive crankcase ventilation system would void the UL certification, which is required for firewater pump engines. Therefore, both the catalytic oxidation system and the positive crankcase ventilation system options will not be required.

### **Step 5: Select BACT**

BACT analysis did not result in any VOC emission control equipment.

Appendix III  
Risk Management Review Summary

# San Joaquin Valley Air Pollution Control District

## Risk Management Review

To: Jag Kahlon - Permit Services  
From: Cheryl Lawler - Permit Services  
Date: March 22, 2012  
Facility Name: Ball Metal Food Container Corporation  
Location: 300 Greger Street, Oakdale  
Application #(s): N-2253-23-0  
Project #: N-1120248

---

### A. RMR SUMMARY

RMR Summary			
Categories	Emergency Diesel ICE Powering a Fire Pump (Unit 23-0)	Project Totals	Facility Totals
Prioritization Score	N/A <sup>1</sup>	N/A <sup>1</sup>	>1
Acute Hazard Index	N/A <sup>2</sup>	N/A <sup>2</sup>	0.49
Chronic Hazard Index	N/A <sup>2</sup>	N/A <sup>2</sup>	0.88
Maximum Individual Cancer Risk	2.60E-06	2.60E-06	3.39E-06
T-BACT Required?	Yes – PM10		
Special Permit Conditions?	Yes		

1. Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
2. Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

### Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

#### Unit 23-0

1. The PM10 emissions rate shall not exceed **0.25 g/bhp-hr** based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **100 hours** per calendar year. [District Rule 4702 and 17 CCR 93115]

## B. RMR REPORT

### I. Project Description

Technical Services received a request on March 12, 2012, to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for a 240 bhp emergency diesel-fired internal combustion engine powering a fire pump.

### II. Analysis

Technical Services performed a screening level health risk assessment using the District developed DICE database.

The following parameters were used for the review:

Analysis Parameters Unit 23-0			
Source Type	Point	Location Type	Urban
BHP	240	PM <sub>10</sub> g/hp-hr	0.25
Closest Receptor (m)	119	Quad	2
Max Hours per Year	100	Type of Receptor	Business

Technical Services also performed modeling for criteria pollutants NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>; as well as a RMR. The emission rates used for criteria pollutant modeling were 266 lb/yr NO<sub>x</sub>, 0 lb/yr SO<sub>x</sub>, 13 lb/yr PM<sub>10</sub>, and 13 lb/yr PM<sub>2.5</sub>. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

#### Criteria Pollutant Modeling Results\*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA <sup>1</sup>	X	NA <sup>1</sup>	X	X
NO <sub>x</sub>	NA <sup>1</sup>	X	X	X	Pass
SO <sub>x</sub>	NA <sup>1</sup>	NA <sup>1</sup>	X	NA <sup>1</sup>	Pass
PM <sub>10</sub>	X	X	X	NA <sup>1</sup>	Pass <sup>2</sup>
PM <sub>2.5</sub>	X	X	X	NA <sup>1</sup>	Pass <sup>2</sup>

\*Results were taken from the attached PSD spreadsheet.

<sup>1</sup>The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour, and 24-hour) standards is not required.

<sup>2</sup>The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

### III. Conclusions

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

The cancer risk associated with the operation of the proposed diesel IC engine is greater than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved **with** Toxic Best Available Control Technology (T-BACT) for PM<sub>10</sub>.

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for the proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

Appendix IV  
TV Form - 009

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

☐ SIGNIFICANT PERMIT MODIFICATION

☐ ADMINISTRATIVE

☒ MINOR PERMIT MODIFICATION

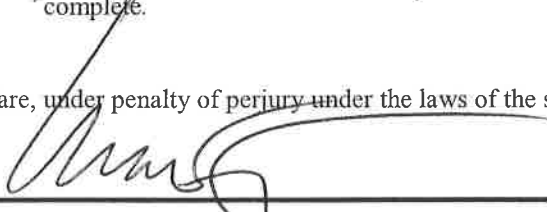
AMENDMENT

COMPANY NAME: <b>Ball Metal Food Container Corp., LLC</b>	FACILITY ID: N <b>2253</b>
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Ball Corporation	
3. Agent to the Owner: NA	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- ☒ Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- ☒ Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

  
\_\_\_\_\_  
Signature of Responsible Official

2/7/2012  
\_\_\_\_\_  
Date

**Michael Wright**  
\_\_\_\_\_  
Name of Responsible Official (please print)

Plant Manager  
\_\_\_\_\_  
Title of Responsible Official (please print)